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MANITOBA RENAL PROGRAM

SUBJECT ▪ Collection of Peritoneal Dialysis Effluent From a Peritoneal Dialysis Drain/Sample Bag for Peritonitis Investigation	**SECTION** 40.10 Peritoneal Dialysis Procedures **CODE** 40.10.14
AUTHORIZATION ▪ Professional Advisory Committee, Manitoba Renal Program ▪ Nursing Practice Council, St. Boniface Hospital (pending)	**EFFECTIVE DATE** October 2015 **REVISION DATE** December 2017

PURPOSE:

1. To collect a peritoneal dialysis effluent sample from a peritoneal dialysis patient.

2. To ensure the process used for obtaining and sending samples of effluent for peritonitis investigation is performed accurately and consistently to ensure early diagnoses and treatment of peritonitis.

POLICY:

1. Indications for peritonitis investigation include, but are not limited to:
   a. Cloudy or hazy effluent
   b. Anytime patient complains of abdominal pain of unknown origin.
   c. Anytime patient presents with fever of unknown origin.
   d. Part of any sepsis work-up on a peritoneal dialysis patient.

2. Two samples are required: One for cell count and one for culture. Some sites will require nursing to collect each of these samples; some labs will collect the cell count from the culture specimen. Refer to your site specific lab policy.

3. All Registered Nurses (RN) and Licensed Practical Nurses (LPN) who have received education and training and who are competent may perform this procedure.

EQUIPMENT:

- Hematology or Urine/Fluid Requisition
- Microbiology requisition
- Patient ID labels x 4
- Effluent sample bag
- 20 ml luer lock syringe x1
- 60 mL luer lock syringes x 1
- Blunt fill needles x 2
- 2% Chlorhexidine (CHG) with 70% alcohol swabs x 4
- EDTA purple top tube
- Blood culture bottles (1 aerobic {blue}, and 1
- See 40.10.14a *Appendix A Site Specific Requisitions*
- See 40.10.14b *Appendix B Decision Tree for Obtaining Peritoneal Effluent Sample*

anaerobic {purple})
- Sterile screw top specimen container

PROCEDURE:	**KEY POINT:**
1. Perform hand hygiene.	
2. Gather supplies.	
3. Complete requisition for Cell Count and differential.	▪ Mark requisition as STAT. ▪ See 40.10.14a to fill out site specific requisitions.
4. Complete requisition for Cultures.	▪ See 40.10.14a to fill out site specific requisitions ▪ Check off any other tests as indicated.
5. Perform hand hygiene.	
6. Remove outer caps of the culture bottles. Cleanse the rubber stopper for 30 seconds using a separate 2% chlorhexidine with 70% alcohol swab for each bottle and allow to air dry.	▪ Removal of the outer cap is done just prior to commencing specimen collection to prevent possible contamination of the culture bottles. ▪ Even though the bottles are capped, the septum is likely to have been contaminated during the manufacturing process.
7. Aseptically collect effluent from patient's peritoneal dialysis drain/sample bag using 1x 20 ml syringe and 1x 60 mL syringe with blunt fill needle attached. Ensure sterile technique is followed to prevent contamination by using a **30 second friction rub with 2% chlorhexidine with 70% alcohol swab to peritoneal dialysis drain/sample bag ports, and allow to dry prior to collection.**	▪ If the peritoneal dialysis drain/sample bag is brought from home it must be less than 2 hours since it was drained from the abdomen. If greater than 2 hours, a drain/sample bag will need to be collected to provide effluent for the samples. ▪ 2% chlorhexidine with 70% alcohol swab is used as alcohol alone does not decontaminate Bacillus species.
8. Using the 20 ml syringe sample inoculate the aerobic and anaerobic culture bottles with 10 mL of effluent each.	▪ **It is important to stop the flow of effluent after 10 mL has been injected into each culture bottle. The vacuum in the bottles is not controlled and can take in up to 18 mL.** ▪ 8-12 mL yields the most accurate results. ▪ It is best practice to inoculate culture bottles first (before EDTA tube and sterile container) to reduce risk of contamination and false positive results)
9. Using the 60 mL syringe, fill the sterile screw top specimen container with a *minimum* of 50 mL.	▪ Used for gram stain and other additional tests if required.
10. Using the 60 mL syringe, inoculate the purple topped EDTA tube with 4 mL of effluent.	▪ Used for cell count.

DOCUMENTATION:

- In the patient record as per facility policy when sending laboratory samples.
- Document and track suspected/confirmed peritonitis per your site specific protocol or standard work.

REFERENCES;

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Skill 43-8 Collecting blood specimens and culture by venipuncture (syringe method and vacutainer method). (2014). In A.G. Perry & P.A. Potter (Eds.), *Clinical nursing skills & techniques* (8th ed., pp. 1083). St. Louis, MO: Mosby Elsevier.